Impact of isntitutional changes on the Hungarian Higher Education after 1989

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Abstract

This study used data summaries and interviews to analyze changes in the Hungarian higher education since 1989. The first part of the article relies on statistical data, and put the Hungarian higher education system into the international context. It focuses on enrollment changes, spending patterns, and the size and quality of teaching personnel. Available data suggested a

dramatic increase in enrollment, coupled with declining or stagnant resources. The second part of the study focuses on micro-level activities of selected universities and departments with special highlight on research, teaching, administration, and institutional change. The study argues that the creation of a stable, performance-oriented, well-financed higher education system in the post-communist Hungary has been achieved imperfectly.

Keywords

Enrollment increase in higher education, higher education systems of transition economies, Law on Higher Education, sector-neutral financing, work incentives.

This article examines the institutional changes in the Hungarian higher education after 1989 with specific emphasis on the explosion in enrollment, decrease in funding, performance incentives, and institutional leadership. First, we compare the increase in higher education enrollment with similar increases occurred in different times in Western Europe and the USA. We discuss the nature of public and private expenditure, and their relative change over time. In the second part of the article we present the results of interviews conducted with department chairs, vice-deans, and budget directors from five Hungarian universities. Interviews help to uncover details of Hungarian higher education not captured by statistical data. We focus on work incentives and other factors that might influence teaching and research in higher education. Furthermore, we are interested in the impact of changing institutional rules on academic activity, and possible remedies to the current problems of the system.

Major Trends

Enrollment Increase

The recent explosion in higher education enrollment in CEE may well resemble to similar increases in Western Europe and the USA in the post-war period. According to data from the Hungarian Ministry of Education, higher education enrollment more than quadrupled between 1989 and 2005 (Ministry of Education, 2006b). Similarly dramatic increases were recorded in the rest of the post-communist countries. The industrialized nations experienced significant enrollment growth in earlier periods. Windolf (1992) examines the growth rates of US, Germany, Japan, France, and Italy between 1870 and 1985. The US experienced an explosion in enrollment rates right after the war due to the GI Bill program (A program that supported enrollment of returning military into higher education. It was adopted by the US Congress in 1944). In five years enrollment rates more than tripled. In contrast, in Germany it took almost 20 years to reach a similar increase in enrollment (from the late 1950s to the late 1970s). In the UK (Mayhew at al. 2004) the most rapid increase occurred between 1988-89 and 1992-93. In four years enrollment rates almost doubled (from 17% to 30%). It was also rapid between 1960-61 and 1972-73 – from 5% to a peak of nearly 14%. This later increase is comparable to the post-war US increase (GI Bill), yet it took more than twice as long as in the US (12 years as opposed to five years).

Windolf (1992) reviewed three major theories explaining educational expansion: human capital, competition over social status, and political theory. According to human capital theory, university enrollment expands at times of economic growth and contracts at times of economic recession. The educational system reacts to the demand in the job market. The competition over social status model credits the increase in education enrollment to the excess pursuit of occupational

career by individuals ("the more the better"). The political theory argues that whether and to what extent universities are supported and enabled to expand is determined by the state. Thus, human capital theory hypothesizes that educational expansion is in direct relationship with the business cycle, the status competition theory predict an inverse relationship, while the political theory argues for no relationship. In his analysis of the five countries, Windolf finds support for the political theory. Mayhew et al. (2004) differentiates between the two growth cycles in the UK by arguing that while the first cycle was well funded, the second cycle was characterized by declining financial resources. Enrollment growth and tightening budgets may force American public universities to come up with coping strategies such as increased reliance on non-governmental resources (quasi-privatization), more focus on societal needs, and stronger lobbying (Benveniste, 1985). In fact, data suggests (Cochran et al. 2006) that the decrease in governmental funding for public universities was offset by an increase in tuition.

The increase in enrollment in the former socialist countries has had a very similar pattern. Reisz (2003) compared the correlation coefficients on college enrollment per thousand inhabitants between 1950 and 2000, for Bulgaria, Czech and Slovak Republic[i], Hungary, Poland, and Romania. The smallest coefficient was slightly below 0.8, while most of them were above 0.85. While the ex-Soviet republics experienced an even harsher financial transition, the underlying trend in enrollment growth is comparable to the above mentioned countries. The sudden increase in enrollment maybe attributed to the relative low level of participation in higher education during the socialist era.

The quadruple increase in the Hungarian higher education fits well into the general trend in enrollment increase in CEE. The private sector in the Hungarian higher education, however, displays a slightly different path from the rest of the most of CEE. In Poland (Kwiek 2003; Duczmal 2005), Romania (Nicolescu 2003; Reisz 2005; Reisz 2006), Ukraine (Stetar et al. 2005), and Bulgaria (Slantcheva 2000) both the number of higher education institutions, and the enrollment to private institutions increased significantly mainly because the impoverished public institutions in these countries had no ability to meet the demand for higher education (Galbraith 2003). In Hungary the increase in enrollment happened mainly in the public sector, although the increase in private sector is greater than in the Czech Republic (Levy 2005). The proportion of private enrollment compared to total enrollment reached 13% in 1998/99, and remained relatively stable since then (see Table 1; also Gömbös 2003**).**

Table 1. Size of higher education in Hungary, 1990/91-2006/7.

Total									
	State institutions		Religious institutions		Private institutions		All		Percent of non-state to total
	Nr. of inst.	Nr. of students	Nr. of inst.	Nr. of students	Nr. of inst.	Nr. of students	Nr. of inst.	Nr. of students	
1990/91	66	107 607	10	550	1	219	77	108 376	0.71
1991/92	66	113 788	10	623	1	279	77	114 690	0.79
1992/93	61	121 447	26	3 298	4	1 129	91	125 874	3.52
1993/94	59	135 695	28	6 110	4	2 755	91	144 560	6.13
1994/95	59	157 404	28	7 154	4	5 382	91	169 940	7.38
1995/96	58	177 482	28	9 055	4	9 049	90	195 586	9.26
1996/97	56	191 291	28	10 629	5	13 195	89	215 115	11.08
1997/98	56	224 695	28	12 655	6	17 343	90	254 693	11.78
1998/99	55	243 077	28	14 291	6	22 029	89	279 397	13.00
1999/00	55	266 144	28	16 227	6	23 331	89	305 702	12.94
2000/01	30	283 970	26	17 590	6	25 729	62	327 289	13.24
2001/02	30	300 360	26	18 922	9	30 019	65	349 301	14.01
2002/03	30	327 456	26	19 821	10	34 283	66	381 560	14.18
2003/04	31	351 154	26	21 626	11	36 295	68	409 075	14.16
2004/05	31	363 961	26	22 666	12	34 893	69	421 520	13.66
2005/06	31	366 797	26	24 078	14	33 286	71	424 161	13.52
2006/07*	31	359 758	26	24 403	14	32 187	71	416 348	13.59

Source: Statistical Guide, Higher Education 2005/2006. Ministry of Education 2006b. page 15, and own computations.

* Preliminary data from the Ministry of Education and Culture.

Private vs. Public Institutions

Another particular aspect of the Hungarian higher education is the presence of public funding in private institutions (private institutions include foundation schools). This practice is not widespread in CEE (Galbraith 2003), but it can be found in at least one more country (Romania; Reisz 2003).

In Hungary, public funding is available in the same way for students in private (including religious schools) as well as public institutions. Data on the distribution of state funding for private, public, and religious schools is presented on Table 2.

Table 2. The proportion of state-funded students between 2000-2006.

Total (full and part-time)			
	State Institutions	Religious institutions	Private Institutions
2000/01	61.62	65.66	16.41
2001/02	58.37	64.92	15.29
2002/03	54.77	65.14	15.37

2003/04	53.36	62.03	15.21
2004/05	52.08	64.52	17.19
2005/06	52.97	63.67	20.58
2006/07	54.41	64.60	22.62
Full-time students			
	State Institutions	Religious institutions	Private Institutions
2000/01	90.23	82.52	53.89
2001/02	88.11	81.86	46.27
2002/03	86.44	81.22	44.26
2003/04	85.27	79.27	41.53
2004/05	82.84	80.83	42.39
2005/06	82.67	79.04	43.90
2006/07	81.03	78.72	44.55

Source: Hungarian Ministry of Education and Culture.

Table 2 presents the proportion of state funded students in public, private, and religious institutions. Interestingly, the proportion of state-funded students in religious institutions was higher than in public universities. Their enrollment, however, never reached 7% of the public institutions' enrollment. There are less state-funded students in private institutions (20%), however, their ratio is double (40% or more) when we look only the full-time students. These

figures underscore the dominance of state funding at all three types of higher education institutions in Hungary.

On the other hand, the data reveals the increased reliance of public institutions on tuition-based education. This phenomenon is not specific to the Hungarian higher education: faced with shrinking budgets, the post-socialist higher education systems extensively use such survival techniques (Reisz 2005). By 2004/5, the proportion of state-funded students among the total full-time students has dropped below 85% even in state institutions. In these same state institutions less than 15% of the part-time (non-traditional students) received state-funding, even though they represent almost half of the total student population. Overall, even before the introduction of tuition, almost half of the total students pay for their education.

A planned tuition starting from 2008/9 would cover around 33% to 50% (depending on the cost of the particular education) of the actual higher education costs. Since it does not cover the full cost of education, it will be called education contribution rather than tuition. While the institutions are free to establish different levels of tuition, at the moment the rectors have agreed to introduce uniform fees that are slightly higher for graduate than for undergraduate education.

The resources of Hungarian higher education after 1989

Understanding higher education spending after 1989 is rather complex in Hungary. Available data consists of higher education expenditures provided from the central budget, and the expenditures of state institutions. We do not have data on spending for private and religious institutions, since present Hungarian laws do not require reporting for these organizations. We

can assess the magnitude of non-public spending for the above-mentioned institutions from their relative share of the overall higher education market (According to Table 1 less than 15% of all students attended non-public institutions, while Table 2 suggests that around 50% of those attending non-public institutions are state-funded). We use two types of data to assess higher education expenditure in Hungary: the ratio of public spending to the GDP, and total spending by public institutions.

INSERT FIGURE 1

Figure 1. Central government higher education expenditure as a percentage of GDP

Source: Ministry of Education (2006a).

In order to interpret Figure 1, one should take into the consideration, that between 1990 and 1993 the real GDP growth was negative 1 to 3 percent, while in the following years it became positive 1 to 4 percent.

Combining total state spending for higher education with non-state spending by public institutions provides 90-95% of the total higher education spending in Hungary.[ii] This figure represents around 1.5-1.8% of the GDP (see Polónyi 2004) while enrollment has been increasing continuously.

A key component of the changes in resources for higher education is the change in the number of instructional personnel. In Hungary, the rapid increase in student enrollment was supported by slightly increasing (or stagnating) instructional personnel (see Figure 2).

INSERT FIGURE 2

Figure 2. Change in number of students and faculty, 1990-2005**.**

Source: Ministry of Education (2006b)

Note: The total number of students is the sum of part- and full-time students (both of the groups having the same weight). The number of teachers represents the total number of part-time and full-time.

Overall, while the resources per capita for higher education have been steadily declining, the demand for higher education has been increasing. Thus, as in Hardin's (1986) tragedy of commons, the resources became overused. It is still better to get into higher education but those graduating are facing increased difficulties in a tightening job market (Berde 2005).

Institutional changes

The frequent change in the institutional environment characteristic to the region (Tomusk 2007) made the overall functioning of the system even more cumbersome. Below we present the major changes in the legal and institutional framework of the Hungarian higher education between 1990 and 2007. (see in more details Polónyi and Timár 2006)

1993: **Law on Higher Education**, creation of the Accreditation Committee. Higher education institutions are granted autonomy, but most of the financing comes from the state. This law has

been amended 35 times since its inception, and 15 out of 35 of these amendments were major changes to the original text.
1995: **Parliamentary Decree on the Development of Higher Education**: Prescribes the increase in higher education enrollment, increase the role of non-traditional education (evening and distance education). Furthermore, it aimed to establish performance measurement, move towards a credit-based higher education system, organize a uniform teacher training, introduce advanced vocational training (which became part of the tertiary education), and create a uniform teaching load (which never really happened).
The 1993 Law on Higher Education introduced a **minimal tuition** (starting from 1994). This system was modified in 1996 by creating two categories of students: state-funded, and tuition-paying. In 1998, **tuition was abolished**.
1996: **Modification of the Higher Education Law:** the incorporation of the advanced vocational training into the higher education system. Introduction of building and instructional aid (besides per student funding).
1999: **Law on the Change of the Institutional Structure in the Higher Education**: 55 public higher education institutions were reduced to 30 (mainly through mergers). By 2006, however, the number of higher education institutions increased to 71 as a result of newly established private and religious schools.
2001: **Parliamentary Decree on the Evolution of Higher Education.** It defines the performance requirements for academia. These requirements, however, are still very vague.
March 1, 2006: after two years of negotiations, the **new Law of Higher Education** creates the institutional framework for the new Bologna-based higher education (bachelor+master). The new system replaced the old three-year (or four-year) college, 5-year **(**or six-year) university system.

The law also allows for public higher education institutions to create private companies to support their research activity. These opportunities, however, are limited.
2007: **Further changes in the system are expected**: a partial return to the base financing is expected, a small but influential group advocates the privatization of higher education.

Alongside the institutional transformation, the curricula also went through significant changes. Furthermore, as a result of the sudden increase in the demand for such professions as economists and lawyers, the composition of newly graduates has been altered. At present, the number of engineering and science graduates is 10 percent below the OECD average (Ministry of Education, 2006b).

Almost everything has changed in the Hungarian higher education: enrollment skyrocketed, resources got reduced, and the institutional environment went through a series of transformations. Furthermore, the first segment of the education levels (bachelors, master, and PhD) became harmonized with the Western higher education system, but the upper levels (Doctor of Academy) stayed the same – the remnants of the Soviet-style higher education (Tomusk 2007).

Monetary incentives: Little room for maneuver

Research Design

The second part of the study examines the results of the interviews conducted between Spring 2006 and Spring 2007 in various higher education institutions. Five prestigious universities of the

country were selected: two from Budapest, and three from the country. We interviewed four department heads from each faculty in addition to the vice-dean from the same faculty, and the budget director from the respective university. In designing our interviews we tried to grasp certain variations such as geographical location (center-periphery), level of leadership (departmental/faculty/university level), and scientific profile (natural sciences/social sciences). Each variation level was selected based on careful consideration. We argue that geographical location matters in terms of access to information and resources. Higher level of leadership may mean more discretion and flexibility. Natural sciences tend to be more expensive (technology intensive). The move towards a market economy increased demand for certain social sciences (law, economics) and natural sciences (engineering, computer sciences), and decreased for others such as teachers, humanities. A description of the interview selection is presented in Table 3.

Table 3. Interview participants

Place	Number of university faculties	Field	Budget Directors and Vice-Deans	Heads of Departments
Budapest	2	Social Sciences	0	4
		Natural Sc.	1+1	4
Rest of the country	3	Social Sciences	1+1	3
		Natural Sc.	2+2	8
Total	5		8	19

Originally we planned to interview four department heads from each university. In one case, however, due to the institutional changes (the departments of the respective faculty were dissolved and replaced by three new institutes) we ended up with three interviews.

There were two other cases, when the planned interviews differed from the actual. In one case, we needed to replace one of the natural sciences faculties (four departments) due to lack of response. In the social science faculty from Budapest, the vice-dean was not knowledgeable of budget issues. At the same institution (at the university level), the budget director gave little information on the areas we were interested in. These responses were excluded from the final analysis.

One of the central questions of our research looked at the role of incentive systems in the Hungarian higher education. Incentive systems are designed to increase performance of higher education. It is important to differentiate between performance and efficiency. In the classical economic terms, efficiency means some sort of maximization of output, while keeping costs at minimal level. It is not clear, however, that universities are interested in minimizing costs. Since most of the funding comes from the state, the efficiency goals are mainly targeted by the state, rather than the universities. According to Jones (1992), universities are more interested in establishing and increasing prestige. The government on the other hand, tries to satisfy two contradicting goals: increase the size of higher education (thus allowing more access to the system), and streamlining the system into a more efficient, cost-effective entity. The contradictory goals and multiple stakeholders make it difficult to set up an adequate incentive

system. In general incentive systems try to focus on two major outputs of academia: teaching and research.

The issue of efficiency and the related performance is quintessential when it comes to examine the Hungarian higher education. Two types of pressures can be observed in this context: a need to secure more funds so that the decreasing per capita state support can be counterbalanced, and the provision of adequate education to an increasing student body, as well as, conducting proper research.

Next we will discuss (1) the way departments cope with the relatively decreased state funding, (2) the type of incentive systems they employ, (3) the research activity, (4) the type of leaders, and (5) possibilities for the young faculty.

Budget

Table 4 discusses some of the key components of the budget.

Table 4. Major topics covered during the interviews (16 departments +3 institutes)*

Topics	Answers
Does state funding cover the salaries of faculty?	15 yes (In one case the whole department voluntarily gave up their bonuses so that they could avoid firing one of their colleagues)

	4 no
Is the money allocated for salaries part of the department's budget?	11 yes 8 no
Money provided from the state budget partly covers non-instructional expenses	8 yes 11 no
Money provided from the state budget completely covers non-instructional expenses	1 yes 18 no
Sources to complement non-instructional spending	Usually from multiple sources: grant monies (mainly state-sponsored or EU-sponsored grants), transfers from funds allocated originally for PhD education, or research. In one department a foundation supported non-instructional expenses. In two departments the student organizations provided support for supplies.
Is there a possibility to influence the budget?	In general, departments are able to exert some level of influence on the budgetary process if they join into institutions, and/or receive support from higher levels (faculty, college).
Authority over the grant money	The university or school usually charges a handling fee between 5 and 50%. The remaining sum is spent at the discretion of the grant applicant.

Compensation above the centrally established salary levels	The vice-deans and budget directors cited some examples where a particular faculty received extra pay, the department heads did not report such cases (with the exception of one young scholar receiving some sort of scholarship).
Bonuses	The vice-deans and the budget directors mentioned couple of examples, however, none of the departments (with the exception of the institution-type departments) reported premiums. All departments emphasized the possibility to be rewarded through external work, grant money. The three institutes plan a premium of 5 to 8 percent of the base salary.
Frequency of grant application	Four departments apply to all available options. The rest of the departments apply for grant money two to eight times a year.
External support	No permanent sponsors. With the exception of humanities departments, all other departments have some sort of support received from private companies.[iii]
External contractor	Three departments work together with academic research groups. One department has its own company. Four departments have permanent external contracts.

Paid courses	Uncertain answers: “It is difficult to assess the size of paid courses since both tuition paying and non-paying students sit in the same classroom.” There are 10 places with paid postgraduate courses, but in only five cases have department discretion over the funds. From time to time, instructors receive compensation from these funds.

* These are not the actual questions we asked, but rather a compilation of relevant topics.

Based on the answers, there is a stark difference between the departments that specialize on more marketable professions, and those that focus on less lucrative professions. In engineering and economics departments projects done for private companies are major source of funding.

Most grant monies come from foundations that are fully or partially state or European Union funded. The shift to grant funding represents a change in the way public resources are allocated to universities, but not a change in the source of funding. More theoretically oriented departments are struggling in the new environment. These departments have been less successful in attracting grant money, they have been forced to make cutbacks. Some departments have difficulties even to pay supplies, while the state support hardly covers rent and electricity. One department head characterized the situation as following:

“Our job is not to write grants. Leading this institution is like tying a man and asking him to swim across the Danube.”

The structure of the departments, performance indicators

Most of the surveyed faculties do not have a specific incentive system. Student evaluations, required by law, seem to play no role in chairs' evaluations of faculty performance. One major reason behind the discounting of student views is that often time the same student who writes the evaluation, does not even attend classes. Frequently, student evaluations are done after the final grade is also known, thus creating the opportunity for students to "retaliate" for unsatisfactory grades. Department chairs may exert influence over colleagues through evaluations of publication, teaching, and grant writing activity. In general, however, departments cannot properly reward teaching or research excellence. Grant money can allow reduced teaching loads, although this is uncommon. Conference and expedition participation may also serve to reward for hard work.

One refreshing exception is the way the interviewed, newly-formed economics institutes applied a complex performance measurement system. The institutes belonging to the economics faculty measure teaching performance, publication, university service and assign points and weights to each activity.

In six cases, the departments reported no incentive systems. In three cases department heads argued that devotion to the career and fear of unemployment are ways to keep employees working. One department head argued that good performers are rewarded with conference participation, while three department heads reported grant (money), and consulting as ways to

reward employees. Consulting and the possibility to work for external organizations were reported by almost all department heads as a possibility to offer some incentives.

None of the departments exceeded 20 persons, and the average department size was 8.7. All departments belonged to an institute, while the institutes were part of faculties. In the three institutes there was 28 faculty members on average. It was difficult to assess the exact teaching load. All departments operate with large student bodies. On average the teaching load is 9.3 hours/ instructor, with a minimum of two and maximum of 22 hours (unfortunately even the length of an "hour" can be different). There was no straightforward answer on the required teaching load, which on the other hand, is supposed to be prescribed by institutions. There maybe a trade-off between teaching and research (Warning, 2004). In our case, however, it was not evident the existence of such trade-off in academic life. In Table 5 we summarize the major findings on research activity in the examined departments.

Table 5. Research activity in the examined departments (2005/6)

Published article in peer-reviewed international journal	0,9/person Minimum and maximum 0-3/person
Published article in prestigious Hungarian journals	In certain fields there is no such journal. Otherwise: 2/person.
Accepted invention	In most places it is not applicable. In two

	places there were attempts to get approval of new inventions.
Published textbook	In humanities one or two per department.
Scientific collaboration with other Hungarian institutions	10 departments
Scientific collaboration with foreign institutions	12 departments
Satisfaction with the availability of non-electronic literature	None of the departments are satisfied, five of them spent money to improve their access.
Satisfaction with the availability of electronic literature	With the exception of humanities all departments relied primarily on electronic resources. All of the departments used the electronic databases provided through the Ministry of Education and Culture. According to five department heads, however, these databases contained only second ranked journals. In general internet was considered as an important source of information.
Research seminars within the department	In 13 of the examined departments there were research seminars or colloquiums to discuss some relevant topic in the field.

Research seemed to have the highest priority for the department heads interviewed. In fact, most of the department heads considered research so important that they devoted most of their time to such activity (35% of the working time). The second most important activity was administration (32%), while non-university related administration accounted to 5%. The reminder of their time (28%) was spent on teaching. One could argue that the relatively high research activity may be due to the easier access of department heads to research resources.

It seems that in the three departments with strong connections with an academic research group, research had very high priority. Financing research is also easier through the research group. In all three cases, the head of research was the same as the head of department, having decision-making power on employment and remuneration in research group.

While all of the examined departments reported on-going changes in the institutional environment, the effects of these changes were hardly elaborated. All departments joined institutes (as we mentioned earlier in three cases the departments themselves became institutes), yet changes in the decision-making process were not observed or discussed. Rather, curricular problems due to the transition to the new education system were emphasized.

Departmental leadership

The chair of the department plays an important role in the activity of a department. He (she) is usually the sole representative of departmental interests on higher levels. Thus, they are the ones with the most influence on strategic questions within the department.

There is an unusually high level of within the institution graduates ("in-breeds") among the department chairs. Fourteen out of the nineteen department heads were students in their own institution. This "in-breed" phenomenon could be attributed to the absence of nation-wide academic job market, as well as to the relatively university specific promotion rules in the Hungarian academia. All fourteen department heads advanced in the career ladder within their own institution, first becoming assistant professor, then associate professor further senior associate professor all the way up to full professorship. In case of two other department heads it was not clear where they graduated from. Only three department heads received their degrees in other than their host institution.

Nine department heads have spent at least one year abroad teaching or doing research, while all of them have spent some time abroad. Only two of the department heads were women (at the humanities departments), underscoring the male dominance in the higher rankings of academia. Around 75% of the respondents became department head before 2000, and 50% of them has been department head since the mid-90s. They put their average working hours way above 40 hours per week.

In terms of remuneration, department heads receive their salary based on academic rank plus extra pay for being department chair (10-15% of the base salary depending on university and rank). Nine of them have other leadership positions within the university which adds further to

their salary. Ten of them had the highest scientific rank – Doctor of Academy – which adds significantly to their salaries. One department head has significant revenue form outside of the university (through a department-related firm). Those willing to disclose their (each of them were academic doctors) salaries averaged around gross 600,000 HUF (approximately $3,000) per month. This level is considered high in public sector (equal to the salary of high-ranked public servants), and relatively high in private sector (mid-level manager). We estimate that those who did not disclose their salary on average are below the above-mentioned level. Furthermore, since all respondents mentioned that their employees (with no leadership positions) receive the state-mandated minimum level of salary we estimate that an average faculty member receives way below the above mentioned salary levels. According to the state mandated higher education salary schedule, the base salary of an assistant professor is less than 38%, while senior associate professor level salaries are close to 70% of the base salary of full professors[iv]. Research revenues, however, are extra pay.

Vice-deans and budget directors

Our interviews with higher level university officials (vice-deans and budget directors) tended to be shorter than the interviews with department heads. This was due primarily to the busy schedule of the above-mentioned university administrators.

Vice-deans considered themselves more part of the faculty than part of the administrative body. This seems to reflect the dominance of technical expertise over the administrative expertise in academia. Such dominance can be observed in other fields such as medicine. Based on self-

reported time schedules, vice-deans spent slightly more time on administration (5% more than department heads), 40% on teaching, and 23% on research. All four interviewed vice-deans graduated in their own institution, advanced in the career ladder, and spent at least ten years in teaching position. Vice-deans reported activities related to managing conflicting interests within the faculty, and budgeting process. Faculty budgets became available by March-May, but vice deans did not feel that they had a lot of discretion in spending the money. They saw their role more like an administrator than a strategist, thus having limited impact on major strategic decisions.

Budget directors considered themselves more like administrators than part of academia. All had graduate degrees in economics or finance, and experience in administrative positions. They had even less involvement in strategic decisions. They acted as part of the executive branch serving the rectors of the universities.

They were all skeptical in the possibilities of expanding and diversifying revenue sources. They predicted dramatic decline in enrollment (due to declining birth rates), and expanding research and consulting would require extensive and serious efforts. One respondent had a negative view on spin-off companies[v]. He was afraid that spin-off companies might take revenues away from the university.

In general, budget directors had an optimistic take on their institutions' future. One asked for more coordination among different units of the university. He also foresaw further separation of elite and mass education in their financing. Another budget director argued for more alignment between the business-type and public sector financial management.

Conclusion

This study used data summaries and interviews to analyze changes in the Hungarian higher education since 1989. The first part of the article relied on statistical data, and put the Hungarian higher education system into the international context. It focused on enrollment changes, spending patterns, and the human resources. Available data suggested a dramatic increase in enrollment, coupled with declining per student resources. The second part of the study focused on micro-level activities of selected state universities and departments with special focus on research, teaching, administration, and institutional change.

Overall, the Hungarian higher education system has been significantly burdened by increased student enrollments, shrinking per student state support, and the need to integrate in the European higher education system (Bologna process). Despite of these pressures, the interviewed departments placed a high value on research as an important aspect of academic performance. Obviously, one driving force behind the heightened research activity is the quest for additional funds that would supplement the relatively decreasing state funds. Most of the grant monies, however, come from state and EU sources rather than the private sector. A significant part of teaching revenues comes from non-public sources – basically in the form of tuition payments. The allocation of these funds together with funds received form the state happens at the university level.

Our study highlighted the ever-changing institutional environment of the Hungarian higher education system. These frequent changes added to the uncertainties and pressures mentioned

above (increased enrollment, stagnant teaching force, shrinking state budgets). A good and stable institutional environment would enhance the efficiency and effectiveness of higher education. Policy makers should be aware of the need for such stable systems.

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[i] The Czech and Slovak Republic was Czechoslovakia before 1993.

[ii] Based on projections from István Polónyi.

[iii] According to Hungarian law, companies are required to pay 1.5% of the gross income paid to their employees into a separate state fund designed to support vocational and professional training. A part of this sum, however, can be transferred to a selected institution, which in turn can use the funds for investment and purchasing.

[iv] The base salary schedules for higher education teaching personnel can be found at www.tudosz.hu/2006_okt_bertabla.html.

[v] Spin-off companies are independent private firms that operate under the new Higher Education Law. They use university resources, and in return a preestablished part of their revenue is transferred to the respective higher education institution.

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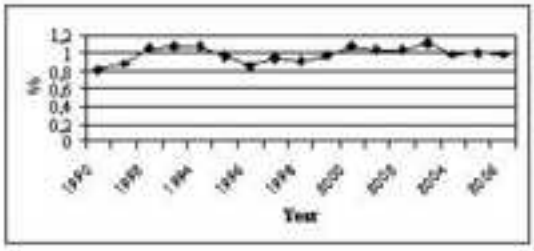

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